IN THE CLAIMS:

Amend Claim 11 as follows:

1. (Previously Presented) A method for the pyrolysis and gasification of organic substances or mixtures of organic substances utilizing an apparatus according to claim 11, wherein

(1.1) the organic substances are introduced into a drying and pyrolysis reactor (1) in which the organic substances are brought into contact with the fluidized-bed material (35) of the combustion fluidized-bed (3) or in which the organic substances are brought into contact with the fluidized-bed material (35) and the reactor wall of the combustion fluidized-bed (3), whereby a drying and pyrolysis take place, in which the organic substances are transformed into steam from the drying and into pyrolysis products (13), where the pyrolysis product consists of gases with condensable substances and solid carbonaceous residue;

(1.2) the solid carbonaceous residue or the solid carbonaceous residue and portions of the steam and of the pyrolysis gases with condensable substances and the fluidized-bed material are guided back into the combustion fluidized-bed (3) in which the carbonaceous residue of the organic substances is incinerated, the fluidized-bed material is heated up and is again guided into the pyrolysis reactor (1);

(1.3) the steam from the drying and the pyrolysis gases (13) are subsequently treated with condensable substance in a further reaction zone (2) such that a product gas (23) with a high calorific value is available;

(1.4) the drying and pyrolysis are carried out in at least one or more pyrolysis reactors (1);

(1.5) the drying and pyrolysis are preferably carried out in two or more pyrolysis reactors (1) which consists of two or more moving bed reactors or of two or more rotary reactors or of rotary reactors and moving bed reactors;

(1.6) the combustion fluidized-bed (3), in which the pyrolysis residues are incinerated, is operated as a stationary fluidized-bed;

(1.7) no gasification agent or, optionally, a gasification agent such as steam, oxygen or air or a mixture thereof is supplied to the pyrolysis gases (13);

(1.8) the pyrolysis gases (13) are led into an indirect heat exchanger (2) in which they optionally react with the gasification agent (21);

(1.9) the firing waste gases (37) or the firing waste gases and the fluidized-bed material of the combustion fluidized-bed (3) are brought into contact with the indirect heat exchanger (2) such that their thermal content is used for the reaction of the pyrolysis gases (13) with the gasification agent (21);

(1.10) the fluidized-bed material (3) consists only of the ash of the organic substances, or of the ash and unburned carbonaceous residues of the organic substances, or of the ash of the organic substances and of additional fluidized material, or of the ash and unburned carbonaceous residues of the organic substances and of additional fluidized material.

2. (Original) A method in accordance with claim 1, wherein the pyrolysis is carried out at a temperature of 450°C to 750°C.

3. (Previously presented) A method in accordance with claim 1,

wherein the product gas (23) is guided back in the pyrolysis reactor (1).

4. (Previously Presented) A method in accordance with claim 1,

wherein gasification agents (21) such as steam, oxygen or air or a mixture thereof are added into the pyrolysis reactor (1).

5. (Previously presented) A method in accordance with claim 1,

wherein the surface of the reactor wall of the combustion fluidized-bed (3) has any closed geometrical shape on the side of the pyrolysis reactor (1) and the combustion fluidized-bed (3).

6. (Previously Presented) A method in accordance with claim 1,

wherein the reactions of the pyrolysis gases (13) with the gasification agent (21) are carried out at temperatures of 800°C to 1,050°C.

7. (Previously Presented) A method in accordance with claim 1,

wherein the reactions of the pyrolysis gases (13) with the gasification agent (21) are carried out in the presence of a catalyst.

8. (Previously Presented) A method in accordance with claim 1,

wherein the reactions (13) with the gasification agent (21) are carried out in a solid bed of catalyst material.

9. (Previously Presented) A method in accordance with claim 1, wherein the reactions of the pyrolysis gases (13) with the gasification agent (21) are carried out in a fluidized-bed of catalyst material.

10. (Previously Presented) A method in accordance with claim 1, wherein the reactions of the pyrolysis gases (13) with the gasification agent (21) are supplied in the presence of a catalyst added to the pyrolysis gas (13) in the entrained flow.

11. (Currently Amended) An apparatus for the carrying out of a method for the pyrolysis and gasification of organic substances or mixtures of organic substances, comprising

a pyrolysis reactor (1),

a fluidized-bed firing (3) for the pyrolysis residue,

a reaction zone (2) for the pyrolysis gases (13),

a fluidized-bed material (35) circulation between the combustion fluidized-bed (3) and the pyrolysis reactor (1),

said pyrolysis reactor (1) being a shaft or rotary reactor, comprising a sluice for introducing application material (10) thereinto,

an inlet for the fluidized bed material (35) into said pyrolysis reactor (1) from the combustion fluidized bed (3), disposed next to the combustion fluidized bed (3);

the pyrolysis reactor (1) having a transport apparatus (14) arranged for transporting a mixture of solid pyrolysis residue and the circulating fluidized bed material (35) into a bottom or location near the bottom of the combustion fluidized bed (3) and disposed towards the ~~at or near~~

~~a~~ bottom of said fluidized bed (3), from ~~and disposed at~~ a lower end of said pyrolysis reactor (1) and disposed underneath the lower end of said pyrolysis reactor (1);

the combustion fluidized bed (3) having an overflow situated at or near a top of said fluidized bed (3) and said pyrolysis reactor (1) and arranged for transferring the circulating fluidized bed material (35) into the pyrolysis reactor (1) and to be constantly filled with the circulating fluidized bed material (35); ~~and~~

said reaction zone (2) comprising a heat transfer member (2) connected to the pyrolysis reactor (1) for receiving the pyrolysis gases (13) from the pyrolysis reactor (1) and to which waste gases (37) from the combustion fluidized bed (3) are supplied for heat exchange with the pyrolysis gases (13); and

said overflow positioned immediately underneath said heat transfer member (2) in said reaction zone (2) of said fluidized bed reactor (3) and downwardly sloping to said pyrolysis reactor (1).

12. (Previously Presented) An apparatus in accordance with claim 11, wherein fluidized-bed material can be removed from the combustion fluidized bed (3) at least at one point or at a plurality of points and can be guided into the pyrolysis sector.

13. (Previously presented) An apparatus in accordance with claim 11, wherein fluidized bed material can be removed from the combustion fluidized bed (3) at least at one point or at a plurality of points by means of one or more overflows and can be guided into the pyrolysis reactor.

14. (Previously Presented) An apparatus in accordance with claim 11, wherein refractory substances can be added to form a fluidized bed.

15. (Previously Presented) An apparatus in accordance with claim 11, wherein the components of the application material which cannot be burned and which cannot be gasified can be used to form a fluidized bed.

16. (Previously presented) An apparatus in accordance with claim 12, wherein fluidized bed material can be removed from the combustion fluidized bed (3) at least at one point or at a plurality of points by means of one or more overflows and can be guided into the pyrolysis reactor.

17. (Previously presented) An apparatus in accordance with claim 12, wherein refractory substances can be added to form a fluidized bed.

18. (Previously presented) An apparatus in accordance with claim 13, wherein refractory substances can be added to form a fluidized bed.

19. (Previously Presented) An apparatus in accordance with claim 12, wherein the components of the application material which cannot be burned and which cannot be gasified can be used to form a fluidized bed.

20. (Previously presented) An apparatus in accordance with claim 13, wherein the components of the application material which cannot be burned and which cannot be gasified can be used in form of a fluidized bed.